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MMPA Bulletin

Differentiating Between "Serious Injuries" and "Non-Serious Injuries"

Section 118 of the MMPA requires that the National Marine Fisheries Service (NMFS) manage commercial fisheries based on the level of serious injury and mortality of marine mammals that occur incidental to each fishery. The number of "serious injuries" must be considered when determining if a fishery has met the goals of a take reduction plan. As a result, providing guidance on what constitutes a "serious injury" is integral to implementing the MMPA.

NMFS clearly defined the term "injury" of marine mammals under regulations implementing section 118 of the MMPA. An injury is defined as a wound or other physical harm: signs of injury may include visible blood flow, loss of or damage to an appendage or jaw, asymmetry in the shape of the body or body position, damage to eyeball, and inability to swim or dive upon release from fishing gear (*refer to 50 CFR 229.2 of the MMPA for the full definition of "injury"*). NMFS defines the term "serious injury" simply as an injury that is likely to lead to mortality. It seems reasonable that some injuries should be considered serious, but precisely which injuries should be considered serious? To begin to address this question, NMFS convened a Serious Injury Workshop in 1997. Participants indicated that whether or not an injury of a marine mammal in commercial fishing gear will lead to a mortality depends on both the marine mammal species and the type of fishing gear involved. Becasue marine mammals are often seen alive with healed injuries, and some become disentangled from fishing lines or nets on their own. Thus, it is obvious that not all marine mammals injured incidental to commercial fishing operations should be considered "seriously injured".

Workshop participants provided advice about what types of injuries should be considered "serious," including:

*** any entanglement which results in an animal trailing gear, such that its mobility or ability to feed was impeded;**

*** cetaceans that ingest hooks; and**

*** marine mammals that are released from fishing gear and swim away abnormally.**

Workshop participants provided advice about what types of injuries should be considered serious. This information will be will be used when NMFS develops draft guidelines for what constitutes a "serious injury." These draft guidelines will be soon published in the *Federal Register*.

For additional information about serious injury determination or to be placed on the mailing list for the draft guidelines contact Cathy Eisele at (301) 713-2322 or at Cathy.Eisele@noaa.gov. To obtain a copy of the Serious Injury Workshop report, contact Nicole Le Boeuf at (301) 713-2322 or at Nicole.LeBoeuf@noaa.gov.

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National Marine Fisheries Service, Office of Protected Resources

Activists Charged in Sugarloaf Dolphin Release

As previously reported in *MMPA Bulletin* issues No. 8 ("What Do We Need to Know Before We Free Willy?"), and No. 9 ("Former Navy Dolphins Rescued in Florida Keys"), NMFS spear-headed a successful rescue effort in 1996 to recover two captive dolphins that were released to the wild by dolphin freedom advocates. NOAA has subsequently filed charges against the responsible parties for harassing and illegally transporting and deliberately releasing the dolphins six miles off the coast of Key West, Florida. Alleging multiple violations of the MMPA, NOAA assessed a total of $60,000 in penalties against those involved.

Charges have been filed against Richard O'Barry of Coconut Grove, FL; Lloyd Good, III, of Sugarloaf Key, FL; Sugarloaf Dolphin Sanctuary, Inc., of Sugarloaf Key, FL; and the Dolphin Project, Inc., of South Miami, FL. All four have been charged with an illegal "take" by harassment and illegal transportation of each dolphin. Both the Sugarloaf Dolphin Sanctuary and The Dolphin Project have also been charged with failing to notify NOAA prior to the transport of the dolphins.

The two dolphins were transported without prior notification and not for purposes of public display, scientific research, or enhancement or survival of the species or stock. The day after the two dolphins were released, one of the dolphins appeared in a congested Key West marina with lacerations, begging for food. The second dolphin, found over 40 miles away almost two weeks after the release, had also sustained deep lacerations and was emaciated. After determining that the dolphins were injured and in need of treatment, NMFS personnel, with the help of others, rescued and provided veterinary care to the dolphins. Following initial treatment, one dolphin was transported to the U.S. Navy facility in San Diego for rehabilitation. The other dolphin was found to be in considerably worse condition, requiring extended rehabilitation, and remains at a Department of Agriculture licensed marine mammal public display facility in the Florida Keys.

Federal officials later seized a third dolphin from the Sugarloaf Dolphin Sanctuary after officials with the Department of Agriculture suspended the facility's license for multiple violations of the Animal Welfare Act. The dolphins had been on public display at the Sugarloaf Lodge motel in Sugarloaf Key since 1994. Prior to that, these dolphins were part of the U.S. Navy's marine mammal research program, and had been in captivity since the late 1980s.

NMFS maintains that in order to protect the health and welfare of marine mammals, any release should be conducted only under an MMPA scientific research permit. Applications for such permits are subject to scientific and public review, and would involve the development of a release protocol that addresses important concerns such as whether: 1) a released animal is properly and humanely prepared to live in the wild; 2) long-term follow up monitoring of the animal is conducted; 3) wild marine mammals would be affected; and 4) contingency plans are in place if it is necessary to rescue a released animal.

"These dolphins were injured, needed medical attention, and could have died. This incident underscores the need to conduct any dolphin release scientifically and with follow-up to ensure the health and welfare of the animals," said Terry Garcia, Assistant Secretary of Commerce for Oceans and Atmosphere and NOAA Deputy Administrator. "Prior to the release, we repeatedly warned these individuals of the risks inherent in releasing dolphins without a scientific research permit. They agreed to apply for a permit, but didn't and released the dolphins without one. A scientific research permit, if issued, would have facilitated the development of a responsible release protocol and authorized any take that could have occurred incidental to a release."

Wildlife experts agree that releasing captive marine mammals has the potential to hurt both the released animals and the wild marine mammals they encounter. Experts are concerned about the ability of a released animal to hunt for food, defend itself from predators, and avoid interactions with people and boats. Other concerns include disease transmission and unwanted genetic exchange between a released animal and wild marine mammal stocks, as well as any behavioral patterns developed in captivity that could affect the social behavior of both the released animals and wild animals.

This case is expected to go before an administrative law judge for a hearing in the near future.

For additional information about this case, contact Scott Smullen at NOAA/NMFS Public Affairs at (301) 713-2370. For information about captive release concerns, contact Trevor Spradlin at (301) 713-2289.

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Stranding News

Recent Stranding Events

California Sea Lion Die-Off

Between May 21-31, more than 70 California sea lions *(Zalophus californianus)* were found on the central California coastline in physical distress. Almost half of the animals died despite exaustive efforts to save them. Symptoms included "grand mal" seizures, loss of coordination, vomiting, foaming at the mouth, and diarrhea. Unlike the large numbers of young, emaciated sea lions and fur seals that have stranded as a result of El Niño (as reported in the *MMPA Bulletin* issue No. 11: "Recent Mass and Unusual Stranding Events"), most of these sea lions were sub-adult or adult animals in relatively good body condition, and many were pregnant females.

The staff and volunteers of the Marine Mammal Center in Sausalito, California responded to the majority of these animals, transporting them to their rehabilitation facility for emergency care. The unique symptoms exhibited by the sea lions seemed to suggest exposure to some sort of toxic agent. The bulk of the animals were treated with fluids to flush their systems and rehydrate them, as well as sedatives to calm their seizures. In addition to administering triage care, NOAA and state researchers began the long process of analyzing tissue, blood, and urine samples to determine the exact cause of the physiological trauma. The seizuring is believed to be related to the biotoxin, domoic acid produced by a nearby algal bloom, and extensive analyses are currently being conducted to confirm this. The team of state and federal scientists who worked together on this event are scheduled to meet in August to report their findings.

More details on the team's scientific findings will be in future MMPA Bulletin issues. For additional information about this stranding event, please contact Frances Gulland at the Marine Mammal Center at (415) 289-7370 or Joe Cordaro in the NMFS Southwest Regional Office at (562) 980-4017.

Update on Mass Stranding of Rough-Toothed Dolphins

On December 14, 1997, 62 rough-toothed dolphins *(Steno bredanensis)* stranded in the Florida panhandle. Approximately half were returned to the sea, 17 were transported to rehabilitation centers, and the rest died or had to be euthanized on-site. This stranding event was considered especially significant because it is believed that approximately 10% of the entire Western North Atlantic stock of rough-toothed dolphins was involved in the stranding.

Four of the animals rescued from the beach were transported to Mote Marine Laboratory's Mammal Center in Sarasota. Of these dolphins, two males were released back into the wild on March 25th, 86 miles offshore. Both animals were fitted with satellite and radio tags, so researchers could track their movements and attempt to determine the success of the release. Seven other animals were taken to Gulfarium, an aquarium near Fort Walton Beach, and on June 11th, two adult females were also released with a satellite and radio tags on them. Researchers at Mote have been monitoring of all of the animals' movements, although one satellite tag never functioned properly. On July 14th, 112 days after release, the working tag sent its last signal which indicated that the dolphin was in the western part of his range.

You can follow the path of the animals on Mote Marine Laboratory's web site at: http://www.mote.org/~mkmetz/track.phtml.

The Numbers are in for 1997!

In 1997, stranding network participants responded to a total of 998 cetacean and 2,499 pinniped strandings nationwide. Of the live strandings, 626 were released back into the wild consisting of 622 pinnipeds and four cetaceans.

The Marine Mammal Contaminants and Biomonitoring Program

High concentrations of persistant toxic substances in marine mammals is a frequently occurring phenomenon. The tendency of marine mammals to "bioaccumulate" contaminants can be explained by serveral factors including: relative position in the food web; tendency to accumulate large energy reserves in the form of body fat; relatively long life spans; and the relatively high ability to metabolize and secrete toxic substances. In recent years, high concentrations of potentially toxic substances in marine mammals have been documented. These harmful substances can be either naturally occurring chemicals (e.g., biotoxins) or man-made (e.g., PCBs and pesticides).

The *Biomonitoring* program was established to develop baseline data, monitor trends, and investigate impacts of disease, natural toxins, and pollution on marine mammal populations. Information on the baseline levels of environmental contaminants and toxins in marine mammals tissues is necessary to determine environmental trends related to the health of these animals.

The *Biomonitoring* Program encompasses:

1) Monitoring
2) Case-specific Investigations
3) Research and Development

This program enables NMFS to determine current status of chemical contaminant concentrations, biotoxins, biochemical components, and health in marine mammals. These analyses will hopefully provide much-needed information to help scientists determine trends related to the health of marine mammals and their ecosystems.

The 1998 List of Fisheries

Section 118 of the MMPA requires that NMFS publish an annual list that places all U.S. commercial fisheries into Category I, II, or III based on their frequency of incidental mortality or serious injury of marine mammals, with Category I having the highest.

Participants in Category III fisheries do not have to register with NMFS; however, all Category I and II fisheries are required not only to register, but to carry an observer if requested by NMFS. All fishers, regardless of the category of their fishery, must report all injuries and mortalities of marine mammals that occur incidental to their fishing operations within 48 hours of the incident.

The 1998 List of Fisheries was published in the *Federal Register* on February 4, 1998 (63 FR 5748). The table below shows those fisheries classified in Categories I and II in the 1998 List of Fisheries. On August 11, 1998, NMFS published the proposed List of Fisheries for 1999. Comments on the proposed rule must be received by November 9, 1998. For a copy of the 1999 proposed List of Fisheries, visit the Office of Protected Resources web site.

Fishery Description	Estimated # of vessels or persons	Marine mammal species or stocks incidentally injured/killed	
Atlantic Ocean, Gulf of Mexico, and Caribbean Fisheries			
Category I			
Atlantic Ocean, Caribbean, Gulf of Mexico large pelagics drift gillnet	15	North Atlantic right whale Sperm whale Pygmy sperm whale True's beaked whale Blainville's beaked whale Long-finned pilot whale Atlantic white-sided dolphin Atlantic spotted dolphin Striped dolphin Bottlenose dolphin	Humpback whale Dwarf sperm whale Cuvier's beaked whale Gervais' beaked whale Risso's dolphin Short-finned pilot whale Common dolphin Pantropical spotted dolphin Spinner dolphin Harbor porpoise
Northeast multispecies sink gillnet (including species as defined in the Multispecies Fisheries Management Plan and spiny dogfish and monkfish)	341	North Atlantic right whale Minke whale Atlantic white-sided dolphin Bottlenose dolphin Harbor seal Common dolphin Spotted dolphin Harp seal	Humpback whale Killer whale Striped dolphin Harbor porpoise Gray seal Fin whale False killer whale
Atlantic Ocean, Caribbean, Gulf of Mexico large pelagics longline	361	Humpback whale Risso's dolphin Short-finned pilot whale Atlantic spotted dolphin Striped dolphin Harbor porpoise	Minke whale Long-finned pilot whale Common dolphin Pantropical spotted dolphin Bottlenose dolphin
Gulf of Maine, U.S. mid-Atlantic lobster trap/pot	13,000	North Atlantic right whale Fin whale Atlantic white-sided dolphin	Humpback whale Minke whale Harbor seal
Category II			
U.S. mid-Atlantic coastal gillnet	>655	Humpback whale Bottlenose dolphin Harbor porpoise	Bottlenose dolphin Minke whale
Gulf of Maine small pelagics surface gillnet	133	Humpback whale Harbor seal	Atlantic white-sided dolphin
Southeastern U.S. Atlantic shark gillnet	10	Bottlenose dolphin	North Atlantic right whale
Atlantic squid, mackerel, butterfish trawl	620	Common dolphin Long-and short-finned pilot whales	Risso's dolphin Atlantic white-sided dolphin
North Carolina haul seine	25	Bottlenose dolphin	Harbor porpoise
North Carolina roe mullet stop net	13	Bottlenose dolphin	

Fishery Description	Estimated # of vessels or persons	Marine mammal species or stocks incidentally injured/killed	
Pacific Ocean Fisheries			
Category I:			
CA angel shark/halibut and other specieslarge mesh (>3.5in) set gillnet	58	Harbor porpoise California sea lion Northern elephant seal	Common dolphin Harbor seal
CA/OR thresher shark/swordfish drift gillnet	130	Steller sea lion Dall's porpoise Risso's dolphin Common dolphin Short-finned pilot whale Mesoplodont beaked whales Pygmy sperm whale Harbor seal Harbor porpoise Minke whale	Sperm whale Pacific white-sided dolphin Bottlenose dolphin Northern right whale dolphin Baird's beaked whale Cuvier's beaked whale California sea lion Northern elephant seal Humpback whale
Category II:			
AK Prince William Sound salmon drift gillnet	518	Steller sea lion Harbor seal Harbor porpoise	Northern fur seal Pacific white-sided dolphin Dall's porpoise
AK Peninsula/Aleutians salmon drift gillnet	164	Northern fur seal Harbor porpoise Northern (Alaska) sea otter	Harbor seal Dall's porpoise
AK Peninsula/Aleutian Island salmon set gillnet	109	Steller sea lion	Harbor porpoise
Southeast Alaska salmon drift gillnet	452	Steller sea lion Pacific white-sided dolphin Dall's porpoise	Harbor seal Harbor porpoise Humpback whale
AK Cook Inlet salmon drift gillnet	577	Steller sea lion Harbor porpoise	Harbor seal Dall's porpoise
AK Cook Inlet salmon set gillnet	625	Steller sea lion Harbor porpoise	Harbor seal Beluga
AK Yakutat salmon set gillnet	147	Harbor seal	
AK Kodiak salmon set gillnet	173	Harbor seal	Harbor porpoise
AK Bristol Bay salmon drift gillnet	1,882	Steller sea lion Harbor seal Gray whale Pacific white-sided dolphin	Northern fur seal Beluga Spotted seal
AK Bristol Bay salmon set gillnet	967	Harbor seal Gray whale	Beluga Northern fur seal
AK Metlakatla/Annette Island salmon drift gillnet	60	None documented	
AK Southeast salmon purse seine	373	Humpback whale	
AK pair trawl	2	None documented	
WA Puget Sound Region salmon drift gillnet fishery (Treaty Indian fishing excluded)	900	Harbor porpoise Harbor seal	Dall's porpoise
OR swordfish floating longline fishery	2	None documented	
OR blue shark floating longline fishery	1	None documented	
CA anchovy, mackerel, tuna purse seine	150	Bottlenose dolphin Harbor seal	California sea lion
CA squid purse seine	65	Short-finned pilot whale	

Small Takes of Marine Mammals

Prior to the 1981 Amendments to the MMPA, there were no authorizations possible for the "taking" of marine mammals incidental to any legitimate maritime activity (except for commercial fishing) such as oil and gas exploration activities, unless the activity was given a waiver of the MMPA's moratorium. Such an action, however, required NMFS and the U.S. Fish and Wildlife Service (USFWS) to make stringent findings regarding the status of affected stocks, and the effects of the activity on impacted marine mammal populations. Nonetheless, maritime activities continued, albeit without any authorization for takings.

In 1981, Congress implemented new amendments to the MMPA. One of the critical issues for resolution in that session was that the Amendments allowed for 'small take' authorizations for maritime activities provided that NMFS found their takings: would be few in number; have no more than a negligible impact on those marine mammal species not listed as depleted under the MMPA; and would have an unmitigable adverse impact on subsistence harvests of these species. How practical was this amendment? In the beginning, not very, since few maritime activities having an impact on marine mammals could restrict their activity to ensure that depleted (including endangered and threatened) marine mammals would not be taken.

Two activities that currently qualify for small take authorizations are hard-water oil and gas seismic and exploration activities conducted on the ice in the U.S. Beaufort Sea in Alaska and the proposed launching of the U.S. Air Force's Space Shuttle from Vandenberg Air Force Base (AFB) in California. The former activity was found to have no more than a negligible impact on ringed seals and was therefore authorized for takings effective May 18, 1982. That authorization continues to this day for about a half dozen companies, each employing up to 100 people on the ice each year. The U.S. Air Force, however, abandoned its Space Shuttle program shortly after it received a small take authorization in September 1986. The Air Force reapplied for takings incidental to the large Titan IV rocket's polar launched programs in 1990 and were first authorized a "small take" of marine mammals in 1991 to cover the potential effects of launch noise and sonic booms on those pinnipeds inhabiting the Channel Islands and the California coast. That authorization has expanded recently to include all types of rocket and missile launches from Vandenberg AFB.

In 1986, Congress amended the MMPA to authorize takings of depleted marine mammals, provided that the taking (lethal, injurious, or harassment) was small and had a negligible impact on marine mammals. The amendments authorized the incidental taking of depleted and Endangered Species Act-listed marine mammals, provided that the take (including mortality) was authorized under section 101(a)(5) of the MMPA. In 1989, NMFS and the USFWS implemented regulations to allow the taking of marine mammals, including those listed under the ESA, incidental to conducting legitimate activities in the marine environment (except commercial fishing). With the MMPA amendment, small take authorizations could be extended, for example, to authorize the harassment of the endangered bowhead whale incidental to open-water oil and gas exploration activities in the U.S. Beaufort Sea.

While most incidental taking authorizations have been limited to harassment, mortalities incidental to an activity can also be authorized. By law, the U.S. Navy is required to test for the survivability in wartime of each new class of ship constructed for it by detonating a series of explosives in the vicinity of the vessel. In 1993, the Navy applied for a small take authorization for "shock testing" of its newest AEGIS-class guided missile destroyer, the USS *John Paul Jones* (DDG-53) off Southern California. After finding that "shock testing" would have no more than a negligible impact on marine mammal stocks in those waters, the authorization was issued on April 12, 1994 and the shock test was conducted in June, 1994.

At the present time, NMFS has small take authorizations under review for: (1) Vandenberg AFB; (2) U.S. Navy "shock testing" of the USS *Seawolf* (a new class of submarine) off the U.S. East Coast in the year 2000; (3) U.S. Coast Guard takings incidental to their vessels and aircraft operations along the U.S. Atlantic Coast; and (4) taking of seals incidental to operations at the Seabrook Nuclear Power Station in New Hampshire.

For additional information about small take authorizations and/or incidental harassment, please contact Ken Hollingshead at (301) 713-2322.

Posters Available to Remind Fishermen to Report Incidental Injuries and Mortalities of Marine Mammals

To remind fishermen of their reporting responsibilities under the MMPA, the Office of Protected Resources, the Center for Marine Conservation, and Norcross Wildlife Association joined forces to develop a poster to be displayed at fishing ports and marinas.

By reporting these events, fishers help NMFS to accurately classify commercial fisheries according to their levels of interaction with marine mammals. The more information that fishers can get to NMFS on these interactions (or lack thereof), the better. The data collected from the reporting forms are crucial to NMFS in making the best fisheries management decisions possible.

If you have a shop or other facility that fishers frequent, and would be willing to display one or more posters, we will ship them to you free of charge.

For more information about reporting requirements or to receive posters, contact Vicki Cornish or Nicole Le Boeuf at (301) 713-2322.

Bycatch Reduction Strategies Successful in the Pacific

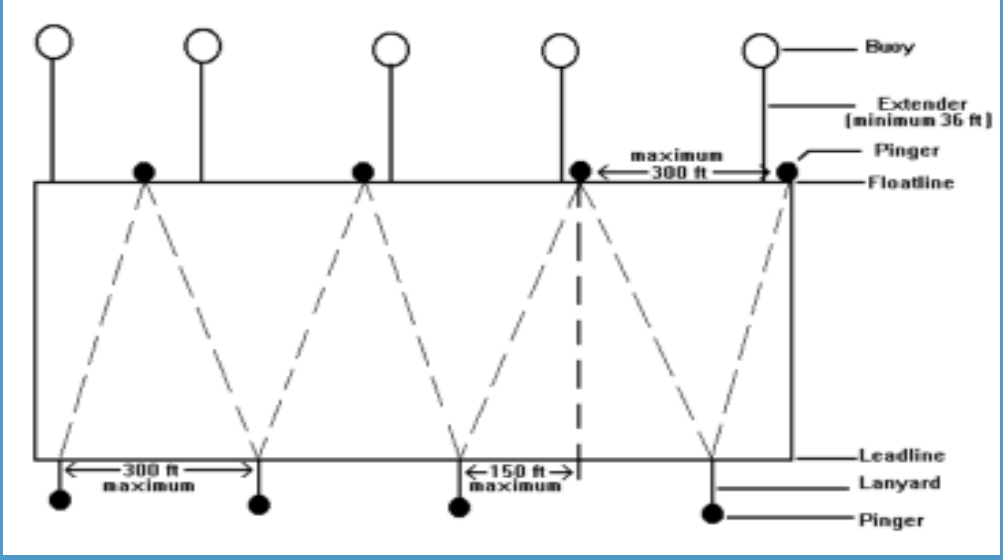
The Pacific Offshore Cetacean Take Reduction Team was reconvened on June 1-2, 1998, in Long Beach, CA, to review progress on whether the California/Oregon swordfish/thresher shark drift gillnet fishery had reached its immediate (six-month) goal of reducing incidental takes of strategic stocks of marine mammals to below Potential Biological Removal (PBR) levels for each stock, as mandated by the MMPA. Strategic stocks taken in years past in this fishery include humpback whales, sperm whales, pilot whales, beaked whales, minke whales, and pygmy sperm whales.

Although final regulations implementing the plan were not effective until after the fishing season had started in 1997, total estimated mortalities for the 1997/1998 fishing season were below PBR for all marine mammal stocks, including all strategic stocks (the overall cetacean take was down 65% when comparing pre-plan with post-plan takings).

Scientists at the NMFS Southwest Fisheries Science Center attribute most of the success of the plan to the mandatory use of pingers (acoustic deterrents) in all areas and at all times, and the setting of nets deeper in the water column. Fishermen and other team members also championed the effectiveness of the eight skipper workshops conducted in California and Oregon prior to the start of the 1997 fishing season, and the large turnout - nearly 100% of the active fishermen attended. The workshops were designed to educate fishermen about the components of the take reduction plan, instruct them on the use of pingers, and solicit feedback from them on other promising take reduction strategies. They also included a presentation on how the plan itself was developed. The mandatory skipper workshops were believed to be a critical factor in the high degree of compliance with the plan and the fishery's success in reaching the six-month goal.

Team members recommended that the plan be maintained without modification for the 1998/1999 fishery season, except that safety concerns regarding the use of pingers be addressed by allowing for longer lanyards to be used to attach pingers to the net. The team also recommended that enforcement of the plan be coordinated with USCG and CA Dept. of Fish & Game officials, that observer coverage continue to target all vessels in the fleet (including previously unobserved small vessels), and that there be continued investigation into other possible strategies that can be implemented to insure that takes continue to be decreased to insignificant levels approaching a zero mortality and serious injury rate (ZMRG). Team members also recommended that the agency issue a final definition for ZMRG as quickly as possible. The team recommended at its last meeting that NMFS conduct mandatory workshops in September/October 1998.

For more information contact Vicki Cornish, NMFS Office of Protected Resources, at (301) 713-2322, or Irma Lagomarsino, NMFS Southwest Region, at (562) 980-4016.



Regulations implementing the Pacific Cetacean Take Reduction Plan require that fishermen place pingers on the floatline and leadline of their nets, at specified intervals, and set their nets at least 36 feet below the surface of the water.

Protected Resources Profile: Robyn Angliss

The Office of Protected Resources would like to wish Robyn Angliss farewell and best of luck in all of her future endeavors as she ends her tenure here. Although the time she spent working with the Office of Protected Resources team was relatively short, she made significant contributions to marine mammal conservation policies there.

Robyn became interested in marine life during the childhood vacations she took with her parents to the California Coast and to Long Island Sound in Connecticut. She was amazed at the diversity she found in tide pools and loved to fish.

In 1989, Robyn's first job was with NMFS as a contract employee monitoring population abundance of killer and humpback whales in Prince William Sound after the Exxon Valdez oil spill. Soon afterward, she volunteered for the NMFS National Marine Mammal Laboratory (NMML) in Seattle for approximately six months on a humpback whale photo-identification project. The next year, she received a Bachelor of Science degree in oceanography from the University of Washington and immediately began working full-time for NMFS doing bowhead whale aerial photogrammetric research. In addition, Robyn participated in aerial surveys over Alaskan waters for harbor porpoises, harbor seals, and beluga whales.

Robyn earned a Master of Science degree in fisheries from the University of Washington in 1994, and her thesis focused on bowhead whale population dynamics. Shortly after she completed this milestone, she transferred from NMML to the Office of Protected Resources in Silver Spring, Maryland ***(three days after she defended her thesis!)***.

During her first two years at the Office of Protected Resources, Robyn worked on the implementation of the 1994 Amendments to the MMPA. This included coordination of final regulations for section 118 of the MMPA and the annual publication of the List of Fisheries. More recently, she has tackled what constitutes a "serious injury" for incidentally taken marine mammals (see page 1) and the draft Report to Congress on the Zero Mortality Rate Goal.

During her time spent with the Office of Protected Resources, Robyn enjoyed working with many different types of people more than anything else. She liked the fact that working to build policy recommendations gave her the opportunity to hear a broad range of perspectives that she would not have otherwise come in contact with. “Policy-makers have to consider many sources of information and take into account the opposing views of the numerous people involved. That’s sometimes hard to do, but I enjoy the process,” she says.

Robyn wants to continue her scientific endeavors, and has a definite preference for science with policy applications. So, after gaining hands-on experience in marine mammal research at NMML and experience in marine mammal policy and management at Office of Protected Resources, the call of higher learning is beckoning Robyn again. Last fall, she began a Ph.D. program in conservation biology at the University of Minnesota. For her dissertation, Robyn will again be working with NMML and will focus on population dynamics of marine mammals. Robyn chose to continue working in population dynamics because she believes that understanding the size and dynamics of a marine mammal population is one of the most vital contributors to sound management.

“Policy-makers have to consider many sources of information and take into account the opposing views of the numerous people involved. That’s sometimes hard to do, but I enjoy the process.”

Whatever challenges Robyn tackles in the future, she will certainly do well. We all wish her the best of luck in her research, and certainly look forward to future collaborations with her.

Upcoming Events

Sept. 9-11 - Acoustic Criteria Workshop in Silver Spring, MD in the Science Room of the NOAA Auditorium (Bldg. 4)

Sept. 10-12 - Stranding Response and Investigations: Sampling and Forensics Workshop in Sausalito, CA at the Marine Mammal Center

NMFS Hears from Stakeholders

In the spirit of cooperation, stakeholders in marine mammal conservation issues have the opportunity to use the MMPA Bulletin as a forum to express their views about working toward common goals. Guest authors from other government agencies, the fishing industry, or conservation groups may contribute articles, or letters written to NMFS by constituents may appear. The views expressed by the guest authors are solely their own and do not necessarily reflect NOAA's positions or policies.

Learning to Live with Giants - Elephant Seals Get Right-of-Way at Piedras Blancas
by: Sarah Christie

Marine biologist Bud Laurent never suspected he had the gift of interspecies communication, but these days he has to wonder. If he had sensed such latent talents back in 1988, when he was working for the California Department of Fish and Game, he might not have been so cavalier as to tell a young female elephant seal he was releasing after rehabilitation: "Now go out there and tell all your friends about this place."

Those words have come back to haunt him. The lone seal who washed up on the beach at Morro Bay ten years ago, sick and disoriented, was indeed followed by more of her kind. As many as 5,000 now arrive twice a year at Piedras Blancas, on San Luis Obispo County's north coast, to mate and give birth. Each season their numbers grow. This year they spilled over onto the two most popular beaches on that stretch of coast - Arroyo Laguna and San Simeon Cove - and are even hauling out at the campground at San Simeon State Beach. Laurent, now a county supervisor whose district includes this coastal zone, has been forced to grapple with a problem that has reached critical proportions.

The remarkable rebound of the elephant seal is both a victory and a liability, an opportunity and a headache, to residents and government officials. These giant marine mammals had been hunted to the brink of extinction in the 1800s for the oil in their blubber. They began their comeback after Mexico extended official protection to them in 1922, followed a few years later by the United States. About 60,000 elephant seals now range from Mexico to the Gulf of Alaska, coming ashore in the spring to molt and in the winter to breed and pup.

The best-known colony in California is at Año Nuevo State Reserve in San Mateo County, but the population at Piedras Blancas now rivals it in size. Unlike Año Nuevo, however, the Piedras Blancas shoreline is not a public wildlife preserve - it is owned by the Hearst Corporation. Until last year, access from Highway 1 had been informal and uncontrolled. Even now visitors can step from their cars and stand within a few feet of the animals. Not surprisingly, Piedras Blancas has become a destination for school field trips and tourists.

Clashes and Collisions

Elephant seals are by turns the most remote and the most accessible of all marine mammals. They spend over half their lives at sea, diving deeper than any other pinniped species in search of squid, skates, rays, and deep-sea fish. Typically staying 20 minutes at depths of 1,000 to 2,000 feet, they ply the deepest channels of the Pacific for up to six months at a stretch. When they do come ashore they seem almost oblivious to the presence of humans.

It is not uncommon to see windsurfers, dogs, and families picking their way past densely packed molting bodies as if the seals were so much driftwood. Seeing them at rest, podlike and immobile (except in mating season), many tourists don't realize that, when provoked, these giants can propel themselves across the sand with the - speed of a galloping thoroughbred. Some have learned the hard way. A German tourist was bitten on the backside trying to outrun an immature bull a few years ago, and a woman who had strayed too close to a pup was knocked to the ground by a protective female.

Gawking tourists and illegally parked cars have caused many fender-benders on the narrow highway. In desperation, Caltrans recently straightened a stretch of the road and, at Supervisor Laurent's insistence, provided two parking areas, which now accommodate most motorists who wish to stop. Interpretive displays and signs have been posted to warn people that they should stay off the beach and view the seals from the bluffs, but some refuse to cooperate. The signs have been stolen repeatedly. Meanwhile, seals continue to stray onto the highway. In four collisions this year, three bulls have been killed, two people have been hospitalized, and a van totalled.

Docents and Dramas

Alarmed by reports of parents posing children for photos on the backs of snoozing seals, dressing pups in sunglasses and baseball caps, and throwing sticks for dogs to fetch from between the seals' flippers, several agencies and groups have jointly tried to address the human/seal interaction problem. They include the County, the State Department of Fish and Game, the Resources Agency, the National Marine Fisheries Service, the California Highway Patrol, Caltrans, and the Hearst Corporation, as well as

local residents. Last autumn, a volunteer-based educational group stepped up with a promising plan of action.

Bay Net, the Monterey Bay National Marine Sanctuary Volunteer Network, trains and organizes volunteers to become docents and stroll the shoreline, answering questions about wildlife and natural history. The Sanctuary (the nation's largest) extends well beyond Monterey Bay, as far south as Santa Rosa Creek in Cambria - just below Piedras Blancas. At the request of San Luis Obispo County, and with the help of a $70,000 grant from the Resources Agency, Bay Net launched a docent program at the elephant seals' haul-out site last autumn.

"We aren't beach police," local coordinator Susan McDonald explained. "We are here to educate people and teach them why the seals and all marine wildlife deserve to be treated with respect."

More than 100 potential volunteers came to the first meeting, in November, and 30 were selected for the first training class. "I was amazed," marveled Rachel Saunders, program manager for Bay Net. "It was so heartening to see how passionately people feel about this issue, and how much they want to help irnprove the situation down here."

The 32-hour training touched on natural history, legal issues, public safety, and the psychology of interacting with visitors. The first graduates hit the beaches the day after Thanksgiving and, that first weekend, talked with 1,084 visitors. "We aren't beach police," local coordinator Susan McDonald explained. 'We are here to educate people and teach them why the seals and all marine wildlife deserve to be treated with respect."

As the new docents soon learned, however, their own education had just begun. They were unprepared for the El Niño winter storms. In January, 30-foot waves annihilated the narrow beaches north of San Simeon at the height of breeding and pupping season. Newborns, unable to swim, were washed out to sea like flotsam. Frenzied cows, usually perceived as maternally indifferent, tried in vain to shield their pups with their bodies and shepherd them to higher ground, but waves overwhelmed them. The bulls, meanwhile, relentlessly continued to pursue the cows.

The drama was played out in front of. hundreds of tourists, including a busload of students from Santa Barbara. Docents could only stand by helplessly, some with tears in their eyes, and advise onlookers not to interfere. "It was heart-wrenching, but there was quite literally nothing we could do," said Maryanne Gail, a docent who lives in Cambria. "Our whole message is about not interfering. Besides, our own lives would have been at risk down there on the beach."

Dozens of dead pups washed ashore for days afterward. Some survivors washed up at beaches to the south, where, unable to locate their mothers, they were nursed by surrogates. "Some of the cows have up to five orphan pups around them," said McDonald in early February. "The true test will be to see how many of them survive." By mid-March, about 100 of the estimated 1,750 new pups had died. Around this time the females are swimming out to sea," added Rachel Saunders. "The pups - now called weaners - stay behind, surviving on fat stored from mother's milk. The fattest generally do best, but it remains to be seen how many will survive."

Getting the Message

Mother nature can be a harsh teacher, but she also touches lives in profoundly positive ways, the docents have discovered. The Piedras Blancas site affords some of the most intimate, impressive, and accessible wildlife viewing anywhere in the country, and seals serve as goodwill ambassadors as only animals can.

One docent reported seeing a blue-haired teenager poking an adolescent male seal with a stick. Intervening in the nonconfrontational manner he had been taught, the docent explained to the young man why this was a poor idea. The youth, a visitor from Australia, followed the docent back up the beach, apologizing all the way, and spent the rest of the morning on the bluffs, observing from a respectful distance. Before he left, he thanked the docent and told him, "I'll never look at a wild animal the same way again."

The docents have proved to be highly effective at Piedras Blancas, although so far they are present only on weekends. Another training session, planned for May, may enable them to expand coverage. They can only do so much, however. The Hearst Corporation restricts them to a relatively small piece of the coast, while tourists who walk along miles of historic coastal trails are free to approach seals elsewhere without supervision.

The elephant seals are certainly an attraction to the tourist-dependent towns of San Simeon and Cambria, and are therefore of economic benefit to the region. But they will continue to pose problems until a comprehensive plan is in place to protect them and their human visitors from each other.

Sarah Christie is a freelance writer and aide to San Luis Obispo County Supervisor Bud Laurent. This article was reprinted with permission from the Spring 1998 (Volume 14, Number 1) issue of California Coast & Ocean. For more information about this publication, you may contact the editor, Rasa Gustaitis, in Oakland, CA at (510) 286-0934. For additional information about marine mammal harassment concerns, plesase contact Trevor Spradlin at (301) 713-2289.

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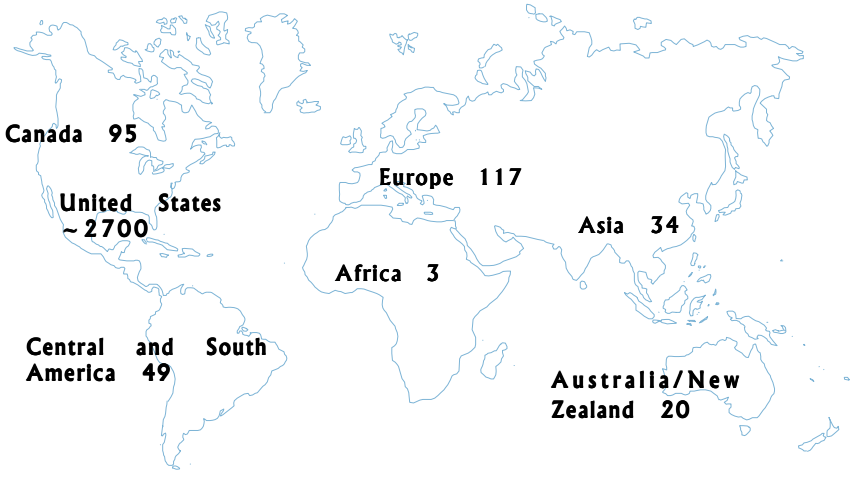
From the Editors...

The *MMPA Bulletin's* mailing list has taken on an international flair over the years, with issues sent to every continent (except Antarctica). In this age of information and technology, the world seems to be getting smaller for everyone - even marine mammals. Wildlife science and conservation transcends international borders and waterways because animals know no political boundaries (especially with regard to marine mammals). Incorporating multi-national and cultural needs into conservation efforts often makes it quite difficult to study and protect marine mammals. NMFS has increasingly found itself working together with other nations to resolve the problems that marine mammals face in our common waters.



With this in mind, it seems only natural that interest in the science and management of marine mammals in U.S. waters would be of interest to those around the world. The large international gathering at the The World Marine Mammal Science Conference (see the 1st Quarter 1998 issue of the *MMPA Bulletin* article), underscores the fact that marine mammal research and conservation issues are indeed global. In fact, the MMPA and the Endangered Species Act are considered by many to be model pieces of legislation that other countries have used to base their own marine mammal protection laws on. The *MMPA Bulletin* editors hope that our efforts to disseminate information about NMFS's programs, policies, and activities will result in increased global awareness of marine mammal conservation issues.

Thanks for your interest and support, The *MMPA Bulletin* Editorial Staff